HEALTH BASICS

Crystal meth

Crystal meth is an illicit crystalline form of methamphetamine, a powerful stimulant drug.

WHAT IT IS
An illicit crystalline form of the stimulant methamphetamine

WHERE IT COMES UP
Drug use, toxicology testing, overdose care, and addiction treatment

WHY IT MATTERS
It can seriously affect the brain, heart, and behaviour

WHAT IT IS NOT
Not a disease or a diagnosis

WHO TO ASK
Primary care, addiction medicine, or a harm-reduction service

HOW IT IS CHECKED
Testing of urine, saliva, blood, or hair

Overview

Crystal meth is a common name for an illicit form of methamphetamine . Methamphetamine is a powerful stimulant like methylphenidate or lisdexamfetamine , meaning it speeds up activity in the brain and body. Crystal meth may look like clear crystals, bluish-white pieces, or powder.

Crystal meth is not a disease or diagnosis. However, using it can lead to medical emergencies and to methamphetamine use disorder . This is a health condition in which methamphetamine use becomes difficult to control and continues despite harm.

Crystal meth may be smoked, injected, snorted, or swallowed. Products sold illegally do not have reliable quality controls. Their strength and contents may be unknown, and they can contain fentanyl or other substances without the person knowing.

A pharmaceutical form of methamphetamine exists and has limited medical uses in some countries. It is made to a controlled standard and prescribed under close supervision. This is different from crystal meth obtained through the illegal drug supply.

How it works

Methamphetamine enters the brain and causes a large increase in chemical messengers, especially dopamine and norepinephrine . These chemicals help regulate reward, attention, movement, heart rate, and the body's response to stress.

Short-term effects can include increased alertness, energy, confidence, and wakefulness. Appetite may fall. Heart rate, blood pressure, and body temperature may rise.

The effects can be intense but do not last indefinitely. As they wear off, a person may feel exhausted, low, anxious, or irritable. Repeated use can lead to tolerance , meaning more of the drug may be used to seek the same effect.

Methamphetamine can also change judgement and impulse control. The route of use matters: methods that deliver the drug to the brain quickly tend to produce a more intense effect and greater risk.

Why it matters for your health

Crystal meth can affect many parts of the body. Immediate concerns include dehydration, overheating, abnormal heart rhythms, very high blood pressure, seizures, and heart or brain blood-vessel problems.

Lack of sleep can add to these effects. After prolonged wakefulness, a person may become confused, suspicious, agitated, or disconnected from reality. This may include hallucinations, such as hearing or seeing things that others do not.

Repeated use is associated with weight loss, skin injuries, dental disease, problems with memory and attention, anxiety, depression, and damage to the heart. Injection can cause wounds and infections. Sharing needles or other injection equipment can transmit HIV and hepatitis B or C.

Pregnancy adds specific concerns because methamphetamine crosses the placenta and may affect both the pregnant person and the pregnancy. Confidential prenatal and substance-use care can help manage these risks.

The illegal drug supply creates another danger. Crystal meth may contain fentanyl, a powerful opioid like oxycodone or morphine that can stop breathing. Appearance, smell, or taste cannot reliably show whether fentanyl is present.

What can go wrong

Crystal meth may be connected with several distinct medical conditions or situations:

Call emergency services if someone has chest pain, severe breathing difficulty, a seizure, collapses, cannot be awakened, becomes extremely hot, or shows signs of a stroke. Stroke signs can include sudden facial drooping, arm weakness, speech trouble, or loss of coordination.

Severe confusion, uncontrollable agitation, or hallucinations that create an immediate danger also require emergency help. Move away from weapons or traffic, reduce noise and stimulation if possible, and do not try to physically restrain the person unless needed to prevent immediate harm.

If someone is unresponsive or not breathing normally, treat it as a possible opioid overdose because fentanyl contamination may be involved. Give naloxone if available, call emergency services, and provide CPR if you are trained.

Withdrawal is not usually the same type of medical emergency as withdrawal from alcohol or benzodiazepines like diazepam or lorazepam . However, severe depression, suicidal thoughts, or inability to stay safe needs urgent or emergency support.

- Stimulant intoxication: harmful effects while methamphetamine is active, such as severe agitation, overheating, chest pain, or dangerously high blood pressure
- Stimulant-induced psychosis: paranoia, delusions, or hallucinations linked to stimulant use
- Methamphetamine use disorder: persistent use that is difficult to control and causes health, work, legal, or relationship problems
- Withdrawal: fatigue, increased sleep or appetite, low mood, anxiety, and strong urges to use after stopping
- Overdose: life-threatening toxicity from methamphetamine, another substance, or an unexpected combination
- Blood-borne infection: HIV or hepatitis linked to sharing injection equipment
- Heart and brain emergencies: heart attack, abnormal heart rhythm, stroke, or bleeding in the brain

What you can do

If you use crystal meth or are worried about someone who does, you can speak with primary care, an addiction medicine service, or a harm-reduction program. Care can be useful even if stopping completely is not your current goal.

Practical steps include:

Treatment can include behavioural therapies, support with housing and other needs, and

contingency management . Contingency management uses structured rewards to support treatment goals and has strong evidence for stimulant use disorder. A specialist may also discuss medications for particular people, although medication choices require an individual assessment.

If you continue using, no step makes crystal meth risk-free. Using with another person nearby, carrying naloxone, avoiding shared injection equipment, and using drug-checking services where available may reduce some risks. Fentanyl test strips can identify fentanyl in some drug samples, but a negative result does not prove that a product is safe.

Routine follow-up is appropriate for concerns about use, cravings, sleep, dental problems, or testing for infection. Seek same-day help for new paranoia, hallucinations, worsening depression, infected injection wounds, or difficulty eating, drinking, or sleeping. Use emergency services for the warning signs listed above.

- Ask about confidential screening for methamphetamine use disorder
- Request tests for HIV, hepatitis B, hepatitis C, and sexually transmitted infections if exposure is possible
- Keep a current list of substances and medications used, including non-prescription products
- Arrange dental care for dry mouth, tooth pain, grinding, or damaged teeth
- Ask about treatment for sleep, mood, anxiety, wounds, or heart concerns
- Tell a prenatal care service about use during pregnancy so care can be planned safely

Common questions

Can a drug test detect crystal meth?

Tests generally look for methamphetamine or related breakdown products, not for "crystal" as a separate substance. Urine, saliva, blood, and hair tests serve different purposes. Detection time depends on the sample, amount used, pattern of use, metabolism, and the test's cutoff. Some medicines can complicate screening results, so unexpected results may need a more specific confirmation test.

Is crystal meth the same as amphetamine?

No. Methamphetamine and amphetamine are related stimulant drugs, but they are not identical. Some laboratory tests initially group them together and then use confirmation testing to identify the specific substance.

Does crystal meth cause "meth mouth"?

Repeated methamphetamine use can contribute to severe dental disease. Dry mouth, tooth grinding, frequent sugary drinks, poor nutrition, and difficulty maintaining dental care may all play a part. Dental problems are treatable, and early assessment can prevent further damage.

Can naloxone reverse a methamphetamine overdose?

Naloxone does not reverse methamphetamine's stimulant effects. It can restore breathing if opioids such as fentanyl are also present. Because contamination may be unknown, naloxone should be given when opioid overdose is possible while emergency help is called.

Is help available without going into residential treatment?

Yes. Options may include outpatient addiction care, counselling, contingency management, harm-reduction services, peer support, and primary care follow-up. The appropriate setting is based on medical needs, safety, available support, and personal goals.

Sources

- National Institute on Drug Abuse. Methamphetamine DrugFacts . National Institutes of Health; updated May 2021.
- Substance Abuse and Mental Health Services Administration. Treatment for Stimulant Use Disorders . Treatment Improvement Protocol 33, updated 2021. Publication PEP21-02-01-004.
- American Society of Addiction Medicine and American Academy of Addiction Psychiatry. The ASAM/AAAP Clinical Practice Guideline on the Management of Stimulant Use Disorder . Journal of Addiction Medicine. 2024;18(1S):1-56.
- Cruickshank CC, Dyer KR. A review of the clinical pharmacology of methamphetamine . Addiction. 2009;104(7):1085-1099.
- Centers for Disease Control and Prevention. What You Can Do to Test for Fentanyl . Stop Overdose resources.
- Centers for Disease Control and Prevention. Lifesaving Naloxone . Stop Overdose resources.